

REMARKS/ARGUMENTS

Favorable reconsideration of this application is respectfully requested.

With respect to the withdrawal of the objection to the drawings, applicants also note the replacement drawings filed on May 23, 2005 did include the indications "Replacement Sheet", which is believed to be proper. For convenience a copy of those replacement sheets is provided herewith.

Claims 1-29 are pending in this application. Claims 1-9, 12-17, and 20-27 are allowed. Claims 10, 18, and 28 were rejected under 35 U.S.C. §103(a) as unpatentable over applicants' admitted art and further in view of U.S. patent 3,777,367 to Kalagidis and U.S. patent 4,037,125 to Aoki. Claims 11, 19, and 29 were rejected under 35 U.S.C. §103(a) as unpatentable over applicants' admitted art and Kalagidis and Aoki as applied to Claim 10, and further in view of U.S. patent 4,514,670 to Fassel et al. (herein "Fassel").

Initially, applicants gratefully acknowledge the indication of the allowable subject matter in claims 1-9, 12-17, and 20-27.

Addressing the above-noted prior art rejections, those rejections are traversed by the present response.

Applicants respectfully submit no combination of teachings of the admitted art and further in view of Kalagidis and Aoki fully meets each of the limitations of independent claims 10, 18, and 28, and thereby the claims dependent therefrom.

More particularly, independent claim 10 positively recites:

a commutator including...a plane conductive layer...;

a pair of electrode brushes, each pair of electrode brushes including first and second separate portions that are in sliding contact with the contact electrode part of the commutator at respective sliding contact positions of a different distance from an axis of the rotation shaft, and configured to supply electric power to the rotor coils through the commutator,

wherein the respective sliding contact positions of the electrode brushes with the contact electrode part are shifted in the radial direction.

Each of independent claims 18 and 28 recites similar limitations. Applicants respectfully submit such claimed features are not fully met by any of the applied art to the admitted art, Kalagidis, or Aoki, and thereby no combination of teachings of these references meets the above-noted limitations.

Applicants first traverse the basis for the outstanding rejection as it misconstrues the teachings in the admitted art noted on pages 1-4 of the present specification. More particularly, the specification notes admitted art in Figure 17 of the present application on pages 1-4 of the specification. The basis for the outstanding rejection in referring to that admitted art states:

In addition, APA discloses a pair of electrode brushes in sliding contact with the contact electrode pad of the commutator at respective sliding contact positions of a different distance from an axis of the rotation shaft and configured to supply electric power to the rotor coils through the commutator. Wherein the respective sliding contact positions of the electrode brushes with the contact electrode part are shifted in the radial direction.¹

Applicants traverse the basis for the outstanding rejection as it misconstrues the teachings in the admitted art of Figure 17. The admitted art of Figure 17 shows two electrode brushes BO1 and BO2 contacting commutator CM0. As shown in Figure 17 those electrode brushes BO1 and BO2 are located symmetrically on the commutator CM0. The structure shown in Figure 17 does not in fact even show any type of rotation shaft. However, in any event as clearly shown in Figure 17 the electrode brushes BO1 and BO2 are symmetrically formed, and thus even if a rotation shaft was indicated the electrode brushes would clearly be at a *same distance* from an axis of a rotation shaft. Such a structure in the admitted art of

¹ Supplemental Office Action of August 9, 2005, page 4, prenumbered paragraph 1, lines 6-11.

Figure 17 is contrary to the claimed features in which each pair of electrode brushes includes first and second separate portions at a *different distance* from an axis of the rotation shaft.

Further, the outstanding rejection misconstrues the further claimed feature that “the respective sliding contact positions of the electrode brushes with the contact electrode part are *shifted in the radial direction*” (emphasis added). Such a feature is shown for example in Figure 8 of the present specification showing the contact positions of the electrode brushes 16A, 16B shifted in the radial direction. That feature is neither taught nor suggested by the admitted art of Figure 17, in contrast to the position taken in the Office Action. More specifically, as clearly shown in Figure 17 in the present specification the electrode brushes BO1 and BO2 have no shift in the radial direction relative to each other, but again are formed symmetrically with respect to the commutator CM0.

For the above reasons the outstanding rejection is traversed as the basis for the rejection relying on the admitted art of Figure 17 misconstrues the teachings therein.

Moreover, applicants submit the further cited art in Kalagidis and Aoki is also misconstrued and does not overcome the above-noted deficiencies of the admitted art of Figure 17.

The Office Action does recognize deficiencies in the admitted art not “disclos[ing] electrical parts mounting baseboard and a commutator having a plane conductive layer and each pair of brushes having a first and second separate portions in sliding contact with a commutator”.² To overcome such recognized deficiencies in the admitted art the outstanding rejections cite the teachings in Kalagidis and Aoki. However, applicants respectfully submit the teachings in Kalagidis and Aoki do not overcome the above-noted deficiencies in the admitted art not recognized in the Office Action, and do not even overcome the recognized deficiencies in the admitted art.

² Supplemental Office Action of August 9, 2005, page 4, prenumbered paragraph 1, lines 12-14.

In Figure 1 Kalagidis discloses a commutator C with contact electrode parts B having a cylindrical form similar as in the background art of Figure 17. Thus Kalagidis does not provide any teachings beyond those of the admitted art of Figure 17. Specifically, Kalagidis does not disclose or suggest any structure of each pair of electrode brushes including first and second separate portions in sliding contact with a contact electrode part of a commutator at respective sliding positions of a different distance from an axis of a rotation shaft. Further, Kalagidis does not teach or suggest that respective sliding contact positions of the electrode brushes with the contact electrode part are shifted in the radial direction.

Thus, Kalagidis does not provide any teachings to overcome the above-noted deficiencies in the admitted art of Figure 17.

Moreover, the basis for the outstanding rejection relies upon Kalagidis to disclose a plane conductive layer pattern 24-26. However, applicants respectfully submit such a structure in Kalagidis is not a "plane conductive layer pattern". As clearly shown in Kalagidis layers 24-26 in Kalagidis are curved circular layers formed on the curved commutator C. Such a structure in Kalagidis is not a "plane conductive layer pattern".

In such ways, Kalagidis does not even overcome the recognized deficiencies in the admitted art.

With respect to the teachings in Aoki, Aoki also does not overcome the deficiencies of the admitted art in view of Kalagidis.

Aoki is merely cited with respect to disclosing brushes with first and second separate portions. However, Aoki also does not disclose or suggest that each pair of electrode brushes includes first and second separate portions that are in sliding contact with the contact electrode part of a commutator at respective sliding contact positions of a different distance from an axis of a rotation shaft. Moreover, Aoki does not disclose or suggest that respective sliding contact positions of the electrode brushes with the contact electric part are shifted in

the radial direction. Thereby, Aoki cannot overcome the deficiencies in the admitted art in view of Kalagidis.

In further detail Figure 11 in Aoki shows a construction in which the single brush 5 contacts the conductive part 13 at the bottom part of the rotary armature shaft 9. Figure 11 only shows one brush 5, and clearly does not teach any of the above-noted features neither taught nor suggested by the admitted art in view of Kalagidis.

Further, Figure 12 in Aoki, referenced in the Office Action, does not show a structure with a rotary armature shaft 9 and a conductive part 13. Figure 12 also does not show sliding contact positions of the brushes 5₁ and 5₂ with the conductive part 13, nor does Figure 12 show a distance from an axis of a rotary armature shaft 9.

In such ways, applicants respectfully submit Aoki does not overcome the deficiencies of the admitted art in view of Kalagidis discussed above.

In view of these foregoing comments, applicants respectfully submit each of independent claims 10, 18, and 28, and the claims dependent therefrom, patentably distinguish over the combination of teachings of the admitted art in view of Kalagidis and Aoki. Moreover, applicants respectfully submit no teachings in the further cited reference to Fassel overcome the above-discussed deficiencies of the admitted art in view of Kalagidis and Aoki.

As no other issues are pending in this application, it is respectfully submitted that the present application is now in condition for allowance, and it is hereby respectfully requested that this case be passed to issue.

Respectfully submitted,

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